



123

AY/2188

PATENT

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appellants: Peter D. Geiger; Manual J. Alvarez II; Thomas A. Dye

Assignee: Quickshift, Inc. (f/k/a Interactive Silicon, Inc.)

Title: System And Method For Managing Compression And Decompression
Of System Memory In A Computer System

Serial No.: 09/915,751

Filing Date: 7/26/01

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Examiner: Kevin Verbrugge

Group Art Unit: 2188

OCT 04 2004

Docket No.: 40532-P009US
(f/k/a 5143-02501)

Conf. No.: 7482

Technology Center 2100

Dallas, Texas
September 27, 2004

Mail Stop Appeal Brief - Patents
COMMISSIONER FOR PATENTS
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REPLY BRIEF

Dear Sir:

In response to the Examiner's Answer having a mailing date of July 26, 2004 (Paper No. 16) with a two month statutory period for response set to expire on September 26, 2004 (extended to Monday, September 27, 2004), Appellant responds as follows.

ARGUMENT

With regard to the Examiner's claim rejections under §§ 102 and 103 in view of the Garber '539 patent, the Examiner agrees with Appellants that Garber teaches a system and method that relies on secondary memory. In the pending claims, Appellants' claimed invention provides for, on the other hand, a system and method for compression of pages of memory, wherein the system comprises system memory (i.e., primary memory and not secondary memory) and does not rely on secondary memory. Appellants have made it clear in their patent application specification and during the prosecution of the application that a key aspect of their invention is that it does not rely on secondary

memory. Thus, Appellants have claimed a method and system that compresses pages of memory using only a system memory, and Garber does not teach such a system and method.

A system and method can have a secondary memory present and be within the scope of Appellants' claimed invention provided it does not rely on such secondary memory for compression. The Examiner has not disclosed any prior art that teaches such a system or method. Therefore, Appellants' claims are patentable.

There is clear support for Appellants' claimed invention in the specification, including the following excerpts:

In a [prior art] virtual memory system, the non-volatile memory (*e.g.*, hard disk) is used as a secondary memory to provide the appearance of a greater amount of system memory. In a virtual memory system, as system memory becomes full, least recently used (LRU) pages are swapped to the hard disk. These pages can be swapped back to the system memory when needed.

Description of the Related Art, p. 1, line 28 – p.2, line 2.

In the embodiments illustrated in Figures 5A and 5B, a portion of the system memory 218, referred to as the compressed cache 240, may store compressed memory pages. Thus the compressed cache 240 may be located in the memory subsystem 200 of the computer. In one embodiment, the CMMU 214 may allocate the compressed cache 240. The compressed cache 240 may be allocated within the normal memory map of the computer system. Compressed pages may be stored in the compressed cache 240. Pages are generally 4096 bytes. In alternate embodiments, page sizes can be any size as desired by the operating system software.

Instead of swapping inactive pages to the nonvolatile memory 330, embodiments of the system and method as described herein may operate to store inactive pages in a compressed format in the compressed cache 240. In addition, pages from the compressed cache 240, which are maintained in compressed format, can be moved to disk or network in such format for future data storage, retrieval, or transmission over LANs or WANs. Thus, a second order benefit is achieved by storage of compressed pages in the I/O subsystem 300 instead of non-compressed pages.

Detailed Description of the Preferred Embodiment, p. 19, lines 1-15.

Thus, Appellants teach an embodiment which provides for storage of compressed pages in system memory (more specifically, in the compressed cache of system memory) without reliance on nonvolatile memory (*i.e.*, secondary memory). This embodiment does allow for such pages to also be moved to a secondary memory, but does not require or rely on the presence of such secondary memory.

With regard to the Examiner's § 103 rejections in view of Garber, the Examiner continues to offer only his conclusory statements and opinions, without evidence in the record (such as cites to prior art), about what would have been "obvious" or "well-known" to one of ordinary skill in the art. Under the *In Re Zurko* case, which the Examiner himself cited, such conclusory statements and opinions are clearly inappropriate:

Finally, the deficiencies of the cited references cannot be remedied by the Board's general conclusions about what is "basic knowledge" or "common sense" to one of ordinary skill in the art.

...

With respect to core factual findings in a determination of patentability, however, the Board cannot simply reach conclusions based on its own understanding or experience—or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings. To hold otherwise would render the process of appellate review for substantial evidence on the record a meaningless exercise.

In Re Zurko, 258 F.3d 1379, 1385-86 (Fed. Cir. 2001). (Footnote omitted.)

Thus, the Examiner's conclusions are not properly supported. Furthermore, as is clear from the following statement, the Examiner attempts to shift the burden of providing findings on the determination of patentability from the Patent Office to Appellants: "Appellant has not specifically pointed out the supposed errors in the Examiner's action, including stating why the noticed facts are

not considered to be well-known." For at least these reasons, the Examiner has not met his burden of factually supporting and providing a prima facie case of obviousness. The Examiner's duty may not be satisfied by engaging in impermissible hindsight; any conclusion of obviousness must be reached on the basis of facts gleaned from prior art. *See* MPEP §§ 2141-2144.

CONCLUSION

For the above reasons and the reasons stated in Appellant's Appeal Brief, Appellant respectfully submits that rejection of pending Claims 1-49 and 55-134 is unfounded. Accordingly, Appellant requests that the rejection of Claims 1-49 and 55-134 be reversed.

This Reply Brief is submitted in triplicate.

Respectfully submitted,



Michael P. Adams
Attorney for Appellant(s)
Reg. No. 34,763

CERTIFICATION UNDER 37 C.F.R. § 1.8

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Signature



TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	09/915,751	
	Filing Date	7/26/01	
	First Named Inventor	Peter D. Geiger, et al.	
	Art Unit	2188	
	Examiner Name	Kevin Verbrugge	
Total Number of Pages in This Submission	7	Attorney Docket Number	40532-P009US (5143-02501)

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ENCLOSURES (Check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance communication to Technology Center (TC)
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
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<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	Michael P. Adams, Reg. No. 34,763 Winstead Sechrest & Minich P.C.
Signature	
Date	September 27, 2004

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FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 0.00

Complete if Known

Application Number 09/915,751

Filing Date 7/26/01

First Named Inventor Peter D. Geiger, et al.

Examiner Name Kevin Verbrugge

Art Unit 2188

Attorney Docket No. 40532-P009US (5143-02501)

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SEP 27 2004

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit card ☐ Money Order ☐ Other ☒ None

☒ Deposit Account:

Deposit
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Number
Deposit
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Name

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Winstead Sechrest & Minick PC

The Director is authorized to: (check all that apply)

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FEE CALCULATION

1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	
SUBTOTAL (1)				(\$)	

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

		Extra Claims		Fee from below		Fee Paid
Total Claims	<input type="text"/>	-20** =	<input type="text"/>	X	<input type="text"/>	<input type="text"/>
Independent Claims	<input type="text"/>	- 3** =	<input type="text"/>	X	<input type="text"/>	<input type="text"/>
Multiple Dependent					<input type="text"/>	<input type="text"/>

Large Entity		Small Entity		Fee Description
Fee Code	Fee (\$)	Fee Code	Fee (\$)	
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple dependent claim, if not paid
1204	86	2204	43	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$)

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for ex parte reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify)

*Reduced by Basic Filing Fee Paid

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SUBMITTED BY

Name (Print/Type) Michael P. Adams Registration No. 34,763 Telephone 512.370.2858
Signature *Michael Adams* (Attorney/Agent) Date September 27, 2004

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